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Subject: Environmental Defense comments on 2-Vinylpyridine (CAS# 100-69-6)

(Submitted via Internet 6/30/04 to oppt.ncic@epa.gov, hpv.chemrtk@epa.gov, boswell.karen@epa.gov, chem.rtk@epa.gov, MTC@mchsi.com, and mbogle@reillyind.com)

Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for 2-Vinylpyridine (CAS# 100-69-6).

Reilly Industries, Inc., in response to EPA's High Production Volume (HPV) Chemical Challenge, has submitted robust summaries and a test plan describing available data and proposed testing to address SIDS elements required for 2-vinylpyridine. No information is provided regarding its production and transport, but the test plan provides an otherwise adequate summary of background information for this chemical.

2-Vinylpyridine is toxic, corrosive and flammable, and has a pungent disagreeable odor that the sponsor indicates is detectable at less than 1 ppm in air. It is a reactive chemical that is sold with an inhibitor to prevent auto-polymerization and with a recommendation that it should be stored at reduced temperatures to maintain quality. According to this submission, 2-vinylpyridine is used exclusively in industrial applications, primarily in the production of tire cord and bolt adhesives and to a lesser extent in the manufacture of pharmaceuticals. The test plan mentions other possible industrial uses for 2-vinylpyridine, but does not state if it is actually used in any of these applications. The test plan suggests that, in the absence of a spill or accidental release, there is little chance of consumer or environmental exposure to 2-vinylpyridine, and that, if it were to be released, its disagreeable odor and autopolymerization should effectively limit human environmental exposure.

Review of the test plan indicates it is relatively complete. Review of the robust summaries indicates most studies supporting the test plan are relatively recent, were conducted under GLP and used quite pure 2-vinylpyridine. SIDS elements required for the physical/chemical properties and the environmental fate of 2-vinylpyridine have been addressed through literature sources or modeling. Some ecotoxicity data are available, and the test plan proposes to conduct additional studies according to OECD guidelines to address each of these elements currently lacking data. As anticipated from its chemical properties, 2-vinylpyridine is toxic and corrosive at the site of application when administered either orally or dermally to mammals. Studies of genotoxicity indicate it is negative in the Ames system, but the test plan correctly points out that this may be due the fact that 2-vinylpyridine is toxic to the test organisms. On the other hand, its clastogenicity may be due to the chromosomal aberrations observed being in turn due to the chemical reactivity of this compound. Thus, we appreciate that the genotoxicity of 2-vinylpyridine is difficult to assess using conventional assays. The test plan proposes to conduct additional studies of the developmental toxicity of 2-vinylpyridine according to OECD guidelines. We would recommend that,

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given the toxic and corrosive nature of this chemical, any additional studies involving animals should be designed to take full advantage of presently available information and to use the minimum number of animals.

In summary, we consider this submission an acceptable response to EPA's HPV Challenge.

Thank you for this opportunity to comment.

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